

## **REMARKS**

### **I. Introduction**

With the addition of new claims 57 to 75 and the cancellation without prejudice of claims 44 and 55, claims 38 to 43, 45 to 54 and 56 to 75 are pending in the present application. In view of the foregoing amendments and the following remarks, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

Applicants note with appreciation the acknowledgment of the claim for foreign priority and the indication that all copies of the certified copies of the priority documents have been received from the International Bureau.

Applicants thank the Examiner for considering the previously filed Information Disclosure Statement, PTO-1449 paper and cited references.

### **II. Objection to the Specification**

As regards the objection to the Specification, the Examiner will note that the Specification has been amended herein to delete the allegedly improper incorporation by reference. Withdrawal of this objection is therefore respectfully requested.

### **III. Rejection of Claims 38 to 44, 46 to 51 and 56 Under 35 U.S.C. § 102(b)**

Claims 38 to 44, 46 to 51 and 56 were rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,725,006 ("Kawama et al."). Applicants respectfully submit that Kawama et al. do not anticipate the present claims as amended herein for at least the following reasons.

Claim 38 relates to a reflection graduation and recites that the reflection graduation includes first subsections disposed on a silicon substrate, each of the first subsection having etched oblique surfaces. Claim 38 further recites that the reflection graduation includes second subsections having relatively higher reflecting properties as compared to the first subsections and that the first and second subsections are alternatively disposed on the substrate in a first direction. Claim 38 has been amended herein without prejudice to include the features included in claim 44 as filed. That is, claim 38 has been amended herein without prejudice to recite that each first subsection includes at least one secondary V-shaped groove that extends in a second direction, which is perpendicular to the first

direction, along nearly an entire length of an edge of each first subsection. Claim 38 has been further amended herein without prejudice to recite that the second subsections are substantially planar. Support for this amendment may be found, for example, on page 6, line 17 of the Specification.

Referring to claim 44, the Office Action contends at page 6 that boundaries of first subsections can be arbitrarily drawn such that each first subsection includes at least one secondary groove borrowed from a neighboring second subsection. Applicants respectfully disagree with the Office Action's arbitrary determination of boundaries between first and second subsections. Notwithstanding the foregoing, it is respectfully submitted that the Office Action's arbitrary determination of boundaries between first and second subsections is untenable in view of the amendment to claim 38 that the second subsections are substantially planar. That is, a V-shape groove "borrowed" from another V-shaped groove does not constitute a substantially planar second subsection.

Secondary V-shaped grooves may be particularly important if a reflection graduation according to the present application is used in a position encoder. In this regard, it may be advantageous for the quality of generated scanning signals if the scanned graduation is manufactured as precisely as possible. To obtain scanning signals of sufficient quality, different graduation areas with different optical properties should have precisely defined edges. This is achievable by an arrangement of secondary V-shaped grooves in boundary regions between first and second subsections.

It is "well settled that the burden of establishing a prima facie case of anticipation resides with the [United States] Patent and Trademark Office." Ex parte Skinner, 2 U.S.P.Q.2d 1788, 1788 to 1789 (Bd. Pat. App. & Inter. 1986). To anticipate a claim, each and every element as set forth in the claim must be found in a single prior art reference. Verdegaal Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). Furthermore, "[t]he identical invention must be shown in as complete detail as is contained in the . . . claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). That is, the prior art must describe the elements arranged as required by the claims. In re Bond, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). Since Kawama et al. fail to disclose, or even suggest, all of the features

recited in amended claim 38, it is respectfully submitted that Kawama et al. do not anticipate amended claim 38.

As for claims 39 to 43, 46 and 47, which ultimately depend from claim 38 and therefore include all of the features of claim 38, it is respectfully submitted that Kawama et al. do not anticipate these dependent claims for at least the same reasons more fully set forth above in support of the patentability of claim 38.

As regards claim 44, claim 44 has been canceled herein without prejudice, thereby rendering moot the present rejection with respect to claim 44.

As regards claim 48, the Examiner will note that claim 48 has been amended herein without prejudice to include features analogous to features included in claim 45, which was indicated to include allowable subject matter. In particular, claim 48 has been amended herein without prejudice to recite that a method for manufacturing a reflection graduation includes providing a coating of highly reflective material on second subsections. It is therefore respectfully submitted that Kawama et al. do not anticipate amended claim 48 for at least the same reasons that claim 45 was indicated to include allowable subject matter.

As for claims 49 to 51 and 56, which ultimately depend from claim 48 and therefore include all of the features of claim 48, it is respectfully submitted that Kawama et al. do not anticipate these dependent claims for at least the same reasons more fully set forth above in support of the patentability of claim 48.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

#### **IV. Rejection of Claim 53 Under 35 U.S.C. § 103(a)**

Claim 53 was rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Kawama et al. and "Silicon Anisotropic Etching in Alkaline Solutions II" ("Zubel et al."). Applicants respectfully submit that the combination of Kawama et al. and Zubel et al. does not render unpatentable claim 53 for at least the following reasons.

Claim 53 ultimately depends from claim 48 and therefore includes all of the features recited in claim 48. As more fully set forth above, Kawama et al. do not disclose, or even suggest, all of the features recited in claim 48. Zubel et al. are not relied upon for disclosing or suggesting the features of claim 48 not disclosed or suggested by Kawama et al. Indeed, it is respectfully submitted that Zubel et al. do

not disclose, or even suggest, the features of claim 48 not disclosed or suggested by Kawama et al. It is therefore respectfully submitted that the combination of Kawama et al. and Zubel et al. does not render unpatentable claim 53, which ultimately depends from claim 48.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

**V. Rejection of Claims 52, 54 and 55 Under 35 U.S.C. § 103(a)**

Claims 52, 54 and 55 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Kawama et al. and U.S. Patent No. 4,287,235 ("Flanders"). Applicants respectfully submit that the combination of Kawama et al. and Flanders does not render unpatentable the present claims for at least the following reasons.

As an initial matter, claim 55 has been canceled herein without prejudice, thereby rendering moot the present rejection with respect to claim 55.

As regards claims 52 and 54, claims 52 and 54 ultimately depend from claim 48 and therefore include all of the features recited in claim 48. As more fully set forth above, Kawama et al. do not disclose, or even suggest, all of the features recited in claim 48. Flanders is not relied upon for disclosing or suggesting the features of claim 48 not disclosed or suggested by Kawama et al. Indeed, it is respectfully submitted that Flanders does not disclose, or even suggest, the features of claim 48 not disclosed or suggested by Kawama et al. It is therefore respectfully submitted that the combination of Kawama et al. and Flanders does not render unpatentable claims 52 and 54, which ultimately depend from claim 48.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

**VI. Allowable Subject Matter**

Applicants note with appreciation the indication of allowable subject matter contained in claim 45. In this regard, the Examiner will note that claim 45 has been rewritten herein in independent form to include all of the features of claim 38 as filed. It is therefore respectfully submitted that claim 45 is in condition for immediate allowance. New claims 57 to 64 ultimately depend from claim 45 and are therefore also believed to be in condition for immediate allowance.

**VII. New Claims 57 to 75**

New claims 57 to 75 have been added herein. It is respectfully submitted that claims 57 to 75 add no new matter and are fully supported by the present application, including the Specification.

Since claims 57 to 64 ultimately depend from claim 45, which was indicated to include allowable subject matter, it is respectfully submitted that claims 57 to 64 are patentable over the references relied upon for at least the same reasons that claim 45 was indicated to include allowable subject matter.

Since claims 65 and 66 depend from claim 38, it is respectfully submitted that claims 65 and 66 are patentable over the references relied upon for at least the same reasons more fully set forth above in support of the patentability of claim 38.

Since claim 67 includes features analogous to features included in amended claim 38, it is respectfully submitted that claim 67 and claims 68 to 75, which ultimately depend from claim 67, are patentable over the references relied upon for at least the same reasons more fully set forth in support of the patentability of claim 38.

**VIII. Conclusion**

It is therefore respectfully submitted that all of the presently pending claims are allowable. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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